

Characteristics of compatability of high-viscosity oils

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Abstract

© 2015 Springer Science+Business Media New York. The physicochemical properties (density, viscosity, precipitation resistance of sphaltenes) of blends of high-viscosity oils from Permian deposits (Ashal'cha field) with arboniferous oils from the Yamashi field (Tatarstan) are studied. It is demonstrated that when high-viscosity oils are blended, various structure-formation processes that are accompanied by non-additive changes of density, viscosity, and stability may occur. The concentration range of Carboniferous oil in the blend at which the maximum sedimentation resistance and minimum density and viscosity of the blend are attained is determined. It is shown that the change in asphaltene content in the blends is non-additive.

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Keywords

Blending of oils, Compatibility of oils, Recipitation resistance of asphaltenes, Restructuring of oil systems